

## Why Genetically Altered Food Won't Conquer Hunger

By Peter Rosset

**I**N OAKLAND, Calif., the debate over genetically altered foods, proponents like Senator Richard Lugar, the Indiana Republican, argue that such products will be essential if we are to feed the world.

But this claim rests on two persistent misconceptions about hunger: first, that people are hungry because of high population density, and second, that genetic engineering is the best or only way to meet our future needs.

In fact, there is no relationship between the prevalence of hunger in a given country and its population. For every densely populated and

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hungry nation like Bangladesh, there is a sparsely populated and hungry nation like Brazil.

The world today produces more food per inhabitant than ever before. Enough is available to provide 4.3 pounds to every person every day: two and a half pounds of grain, beans and nuts, about a pound of meat, milk and eggs, and another of fruits and vegetables — more than anyone could ever eat.

The real problems are poverty and inequality. Too many people are too poor to buy the food that is available or lack land on which to grow it themselves.

The second misconception is that genetic engineering is the best way to boost food production. There are two principal technologies on the market. Monsanto makes "Roundup Ready" seeds, which are engineered to withstand its herbicide, Roundup. These seeds — usually soybeans, canola or cotton — allow farmers to apply the herbicide widely.

Monsanto and several other com-

To solve a problem, first define it properly.

panies also produce "Bt" seeds — usually corn, potatoes and cotton — which are engineered so that each plant produces its own insecticide.

Some researchers have shown that none of the genetically engineered seeds significantly increase the yield of crops. Indeed, in more than 8,200 field trials, the Roundup Ready seeds produced fewer bushels of soybeans than similar natural varieties, according to a study by Dr. Charles Benbrook, the former director of the Board on Agriculture at the National Academy of Sciences.

Far from being a solution to the

world's hunger problem, the rapid introduction of genetically engineered crops may actually threaten agriculture and food security.

First, widespread adoption of herbicide-resistant seeds may lead to greater use of chemicals that kill weeds. Yet, many noncrop plants are used by small farmers in the third world as supplemental food sources and as animal feed. In the United States, the Fish and Wildlife Service has found that Roundup already threatens 74 endangered plant species.

Biological pollution from genetically engineered organisms may be another problem. Monsanto is poised to acquire the rights to a genetic engineering technique that renders a crop's seeds sterile, insuring that farmers are dependent on Monsanto for new seed every year. Farming in the third world could be crippled if these genes contaminate other local crops that the poor depend on. And such genes could unintentionally sterilize other plants, according to a

study by Martha Crouch, an associate professor of biology at Indiana University. Half the world's farmers rely on their own saved seed for each year's harvest.

A true solution to the problem of hunger depends on attacking poverty and inequality among both producers and consumers of food. A food system increasingly dependent on genetically altered seeds takes us in the wrong direction. □

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